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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,043	02/07/2001	A. Clifton Lilly JR.	021238-330	6209

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EXAMINER

LOPEZ, CARLOS N

ART UNIT PAPER NUMBER

1731

DATE MAILED: 10/07/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/778,043	LILLY ET AL.	
	Examiner	Art Unit	
	Carlos Lopez	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-31 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_ is/are allowed.

6) Claim(s) 1-5,7-26,30 and 31 is/are rejected.

7) Claim(s) 6,27 and 28 is/are objected to.

8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

- 1) Certified copies of the priority documents have been received.
- 2) Certified copies of the priority documents have been received in Application No. \_\_\_\_.
- 3) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ .	6) <input type="checkbox"/> Other: ____ .

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: A brief description of the filed drawings is not included in the disclosure.

Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a

nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The disclosures fails to provide antecedent basis for the terminology recited in claims 2, 6, 7, 14, 15, 21, 22, 27, 28, and 30-31.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1) Claims 1-2, 13-14 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated over Heim et al (US 4,193,412). Heim discloses a cigarette filter element having aluminum and titanium metals to reduce toxic components of the tobacco smoke (Column 1, lines 41-52).

As for claim 2, the metal reagent may be added to a tobacco element or their filter element (Column 1, lines 5-11).

As for claims 13 and 14, a metal reagent is added to a filter element of a smoking tobacco product (Column 1, lines 5-11).

As for claims 20-22, the claimed method is performed by Heim's cigarette.

2) Claims 1,3, 12-13, 20, 23, 26 and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Wennerberg (US 4,656,153). Wennerberg discloses teaches using any transitional metal or combinations thereof supported on a porous carbon (Applicant's claims 26 and 30-31) (Column 7, lines14-20) may be used as a gas filter (Applicants claims 1,13, and 20) (Column 1,lines 14-17 and Examples 5-6). Since Wennerberg uses the instant claimed metals to filter hydrocarbons it would be inherent that the metals filtering hydrocarbons would function in the same manner as recited in applicant's claims 12 and 29.

As for claims 3 and 23, examples 5-6 disclose hydrocarbons being filtered by the metal/carbon filter.

3) Claims 1-2, 7-8, 13-14, 15, 20-22, and 30-31 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Vanin et al (US 5,083,579). Vanin et al disclose a cigarette filter having metal reagent with a cellulose acetate base (Abstract, Column 2 lines 4-40). As for claims 7-8, the cellulose acetate provides support for the metal reagent. As for claims 13 and 20-21, the Vanin cigarette filter performs the claimed method. As for claims 14 and 22, the metal reagent is added the filter plug (12) (Column 4, lines 44-51). As for claim 15, the metal reagent is combined with cellulose acetate fibers as recited above. As for claims 30-31, the metal reagent is non-oxide metal ferrous iron.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4) Claims 3-5, 8-10, 12, 16-19, 23-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim et al (US 4,193,412). Claims 8-9, 18-19 and 26, additionally disclose placing the metal reagent on a support material such as silica gel, carbon or zeolite. While Heim discloses amorphous silica (Column 3, line 67-68) and not silica gel, Official Notice is taking that providing silical gel, carbon or zeolites as claimed by applicant are well known support carriers. Support of the Official Notice may be found at column 2, lines 45-48 of Litzinger (US 3,716,063). It would have been obvious to a person of ordinary skill in the art to have to used silica gel, zeolites, or carbon as claimed by applicant since Examiner takes Official Notice that silica gel, zeolites, or carbon may have been substituted for amorphous silica support carrier in order to provide a wider selection and less expensive support carriers.

As for claims 3, 5, 16, 23, and 25, the filter element removes tobacco smoke, which would include the claimed hydrocarbons.

As for claim 10, the filter element includes aluminum and titanium metals to reduce toxic components of the tobacco smoke (Column 1, lines 41-52).

Since Heim uses the instant claimed metals to filter tobacco smoke it would be obvious to a person of ordinary skill that the metals filtering the tobacco smoke would function in the same manner as recited in applicant's claims 12 and 29.

As for claim 21 and 22, a metal reagent is added to a filter element of a smoking tobacco product (Column 1,lines 5-11), which would eventually filter the smoke of the burning tobacco having the claimed hydrocarbons.

As for claims 4, 17, and 24, since Heim's in column 2, lines 45ff, teaches that the metal powders are "highly dispersed metals", it is an indication that not all the metals are dispersed. Thus, it is obvious to a person of ordinary skill in the art that some metal agglomerated/clusters occurs meeting the limitations of claim 4, 17, and 24.

5) Claims 4, 8, 9, 11, 17-19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wennerberg (US 4,656,153). Wennerberg discloses teaches using any transitional metal or combinations thereof supported on a porous carbon (Column 7, lines 14-20) may be used as a gas filter (Column 1,lines 14-17 and Examples 5-6). Claims 4, 8, 9, 11, 17-19 and 24 additionally recite forming nanometer or micrometer clusters. At the time the invention was made, It is obvious to a person of ordinary skill in the art that mixtures of atoms Ti atoms or Fe atoms with Al atoms would form clusters at the claimed level.

#### ***Allowable Subject Matter***

Claims 6, 27, and 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art does not disclose or reasonably suggest a metal reagent incorporated in a cigarette filter paper located within a free flow filter as recited in claim

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6. Additionally, the cited prior art does not disclose or reasonably suggest silica gel having an average particle diameter of at least 10 $\mu$ m supporting the metal reagent as recited in claims 27 and 28.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

*Steven P. Griffin*  
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C.L  
September 29, 2002